

Presenting your Research Project

Services available from the Visual Information Department

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Building Three Third Floor GME

Who are We

Medical Illustration

- Jean Bonnette – 3-5959

Graphics

- John Kopitzke – 3-1960

Biomedical Photography

- Casey Price (division head) – 3-5837

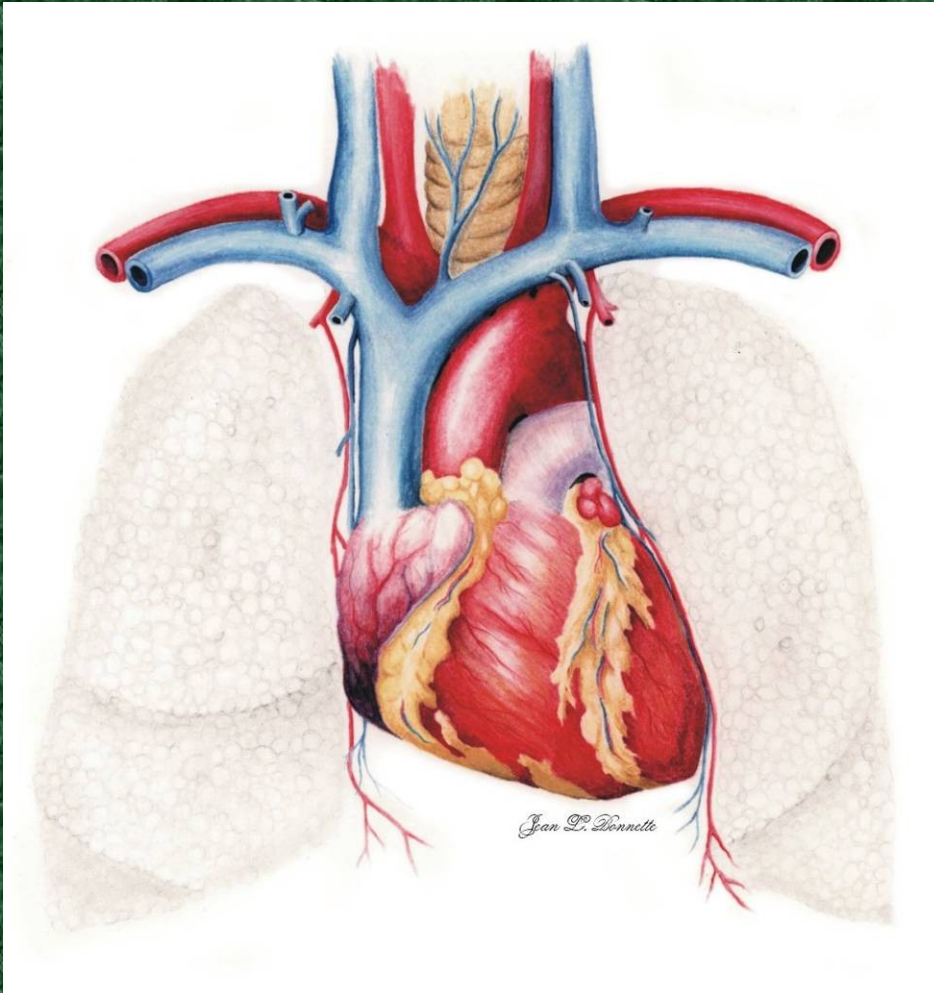
Medical Simulation Center

- Paul Marshall (division head) – 3-5215

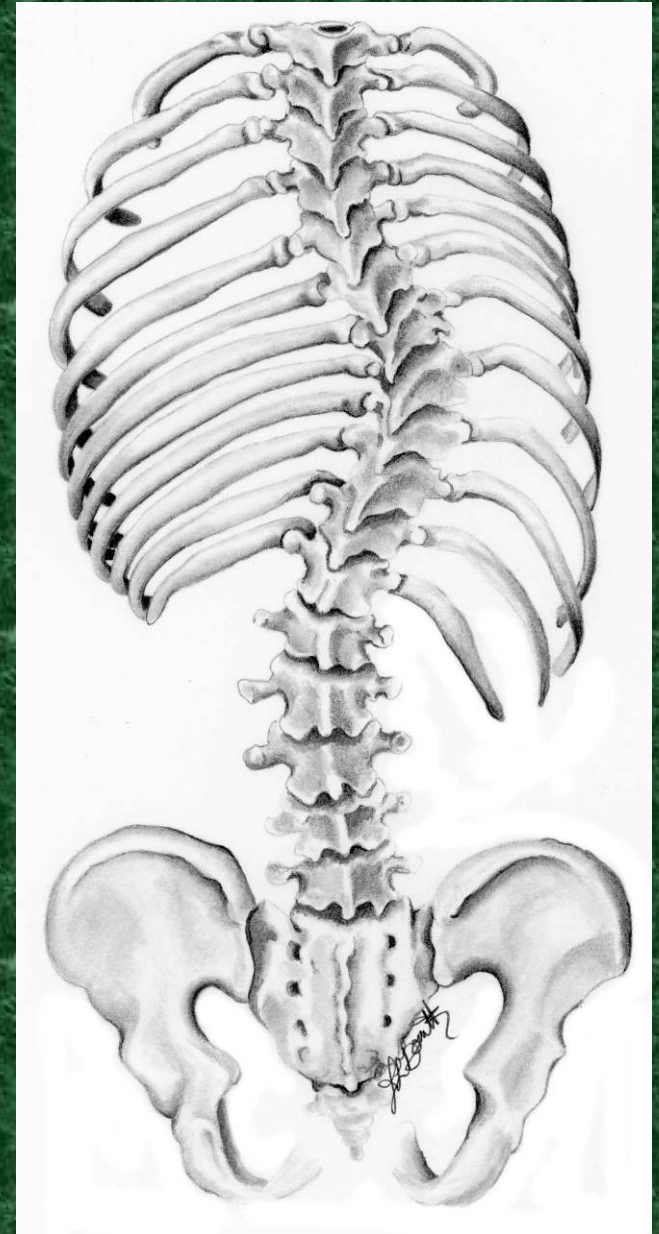
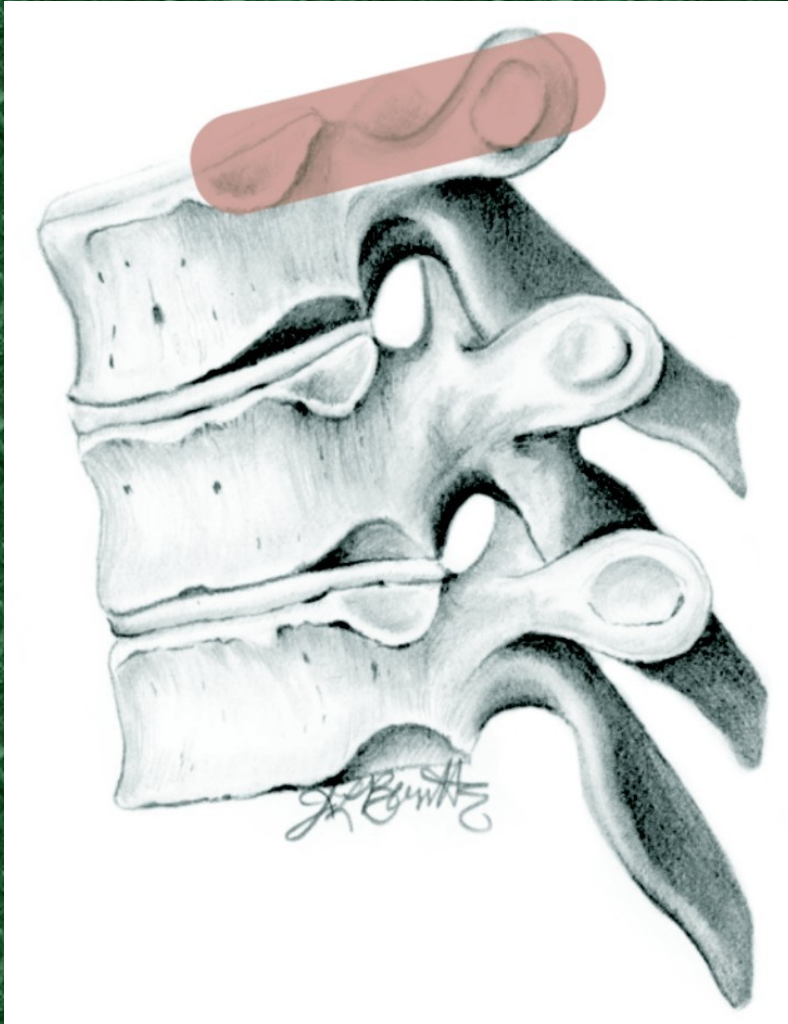
What Can We do For You

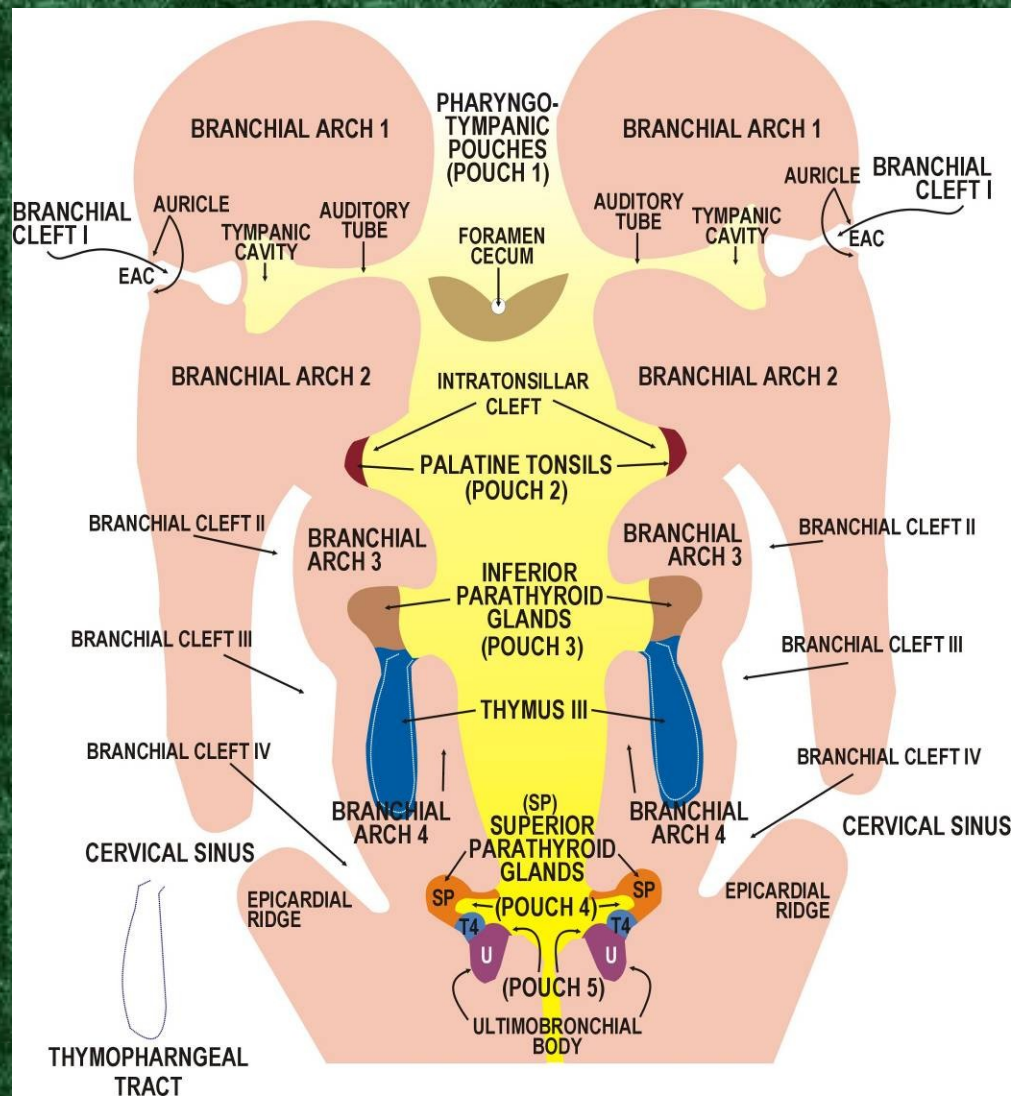
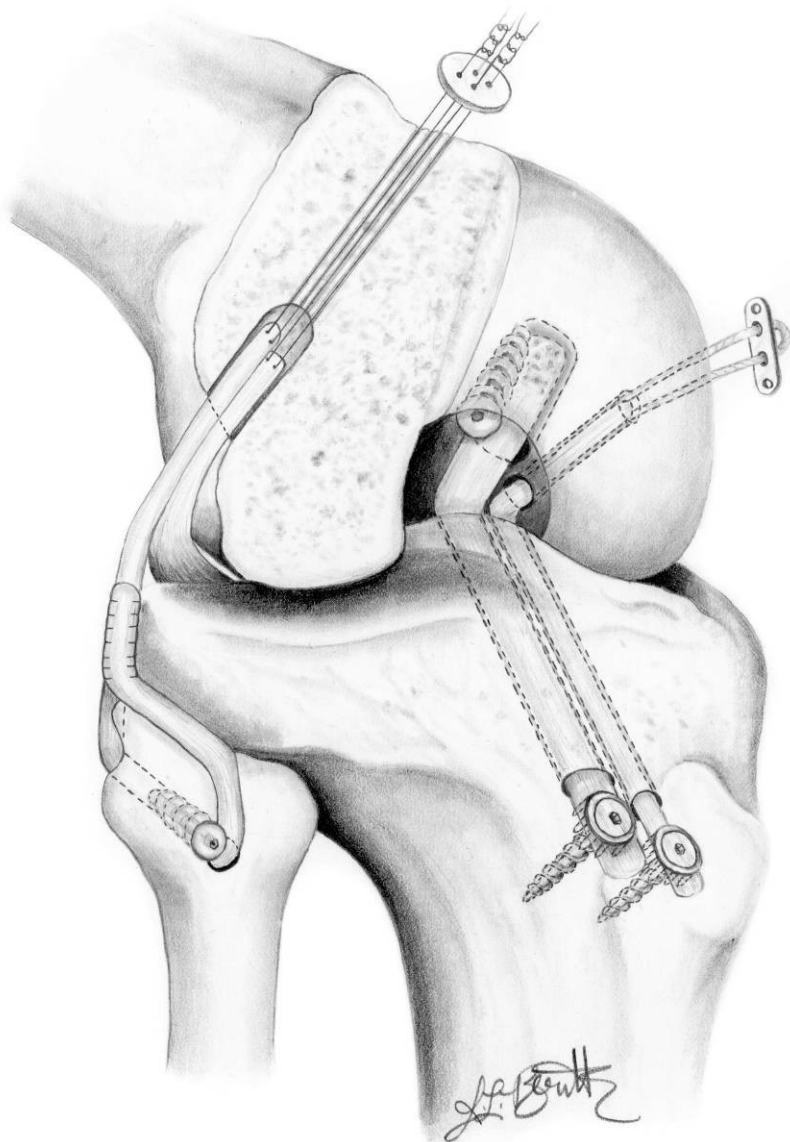
- ☞ Medical Illustration – Anatomical renderings
- ☐ Presentation Design – Posters, PowerPoint
- ☐ Graphic Design
- ☐ Publication Assistance
- ☐ Video production (NEW)
- ☐ Marketing and Patient Education Materials
 - Posters
 - Brochures
 - Reminder cards
- ☐ Business / Appointment Cards
- ☐ Miscellaneous
 - Just ask I will let you know if it can be done – “NO”

Medical Illustration



**Please allow plenty of time
for your drawings**





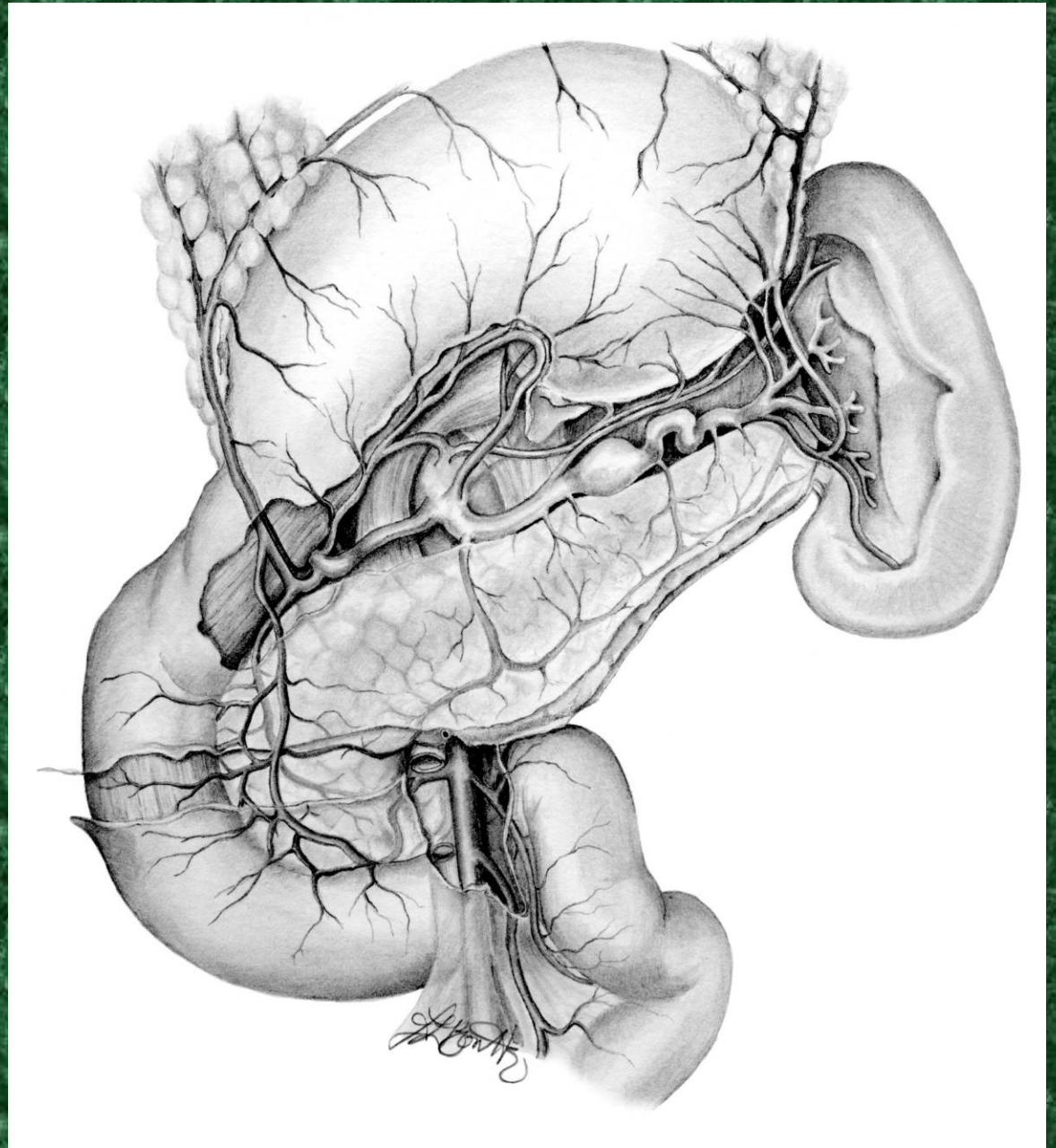
**Quality
reference
material a
must**

**I have one
anatomy
book (Netter)
in my office**

**More is
always better**

**Don't worry
if all you can
draw are
stick figures**

You would be



Posters



A Case of Amoebic Liver Abscess in a Deployed Service Member

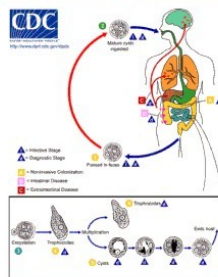
R. Holmes, DO; E. Gonzales, MD; C. Smiley, MD; J. Armstrong, MD
Department of Internal Medicine, Naval Medical Center Portsmouth, Virginia



Introduction

- Amoebiasis is caused by *Entamoeba histolytica*.
- 40 to 50 million people are infected world wide each year.
- An incubation period of 8 to 20 weeks is common in the life cycle of amoebiasis (Figure 1)
- Patients with amoebic liver abscess usually present acutely with 1-2 weeks of fever, right upper quadrant pain, and diarrhea
- We report an unusual case of systemic amoebiasis in a deployed service member.

Figure 1: Life Cycle of Amebiasis



Case Report

- An active duty service member presented with 4 weeks of cyclic fevers.
- Pneumonia was diagnosed initially after an infiltrate was found on chest radiograph.
- Five antibiotics courses did not reverse his progressive fatigue, cough with sputum production, severe weight loss, and persistent back pain.
- Computed Tomography of the thorax yielded the following:
 - A reactive loculated cystic mass in the right upper lobe, (Figure 2 and 3).
 - A subphrenic cystic mass extending to his liver, (Figure 4).
 - A right kidney cyst as shown in (Figure 5).
- During his hospital admission an amoeba antibody test was confirmed strongly positive.
- A 15 day period of metronidazole and paromomycin yielded significant clinical improvement. Follow up CT examinations improved.
- He was later returned to full duty.

Figure 2

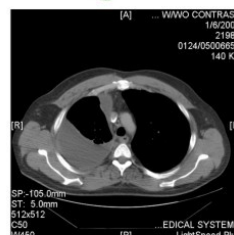


Figure 3



Figure 4



Figure 5



Discussion

- Uniquely, no abdominal pain or gastrointestinal symptoms were ever reported.
- A differential diagnosis at admission included: empyema, coccidiomycosis, echinococcus, amoebiasis, and carcinoma.
- Clues aiding in diagnosis included: travel to endemic areas within incubation time frame, positive amoeba antibody test, and improvement with metronidazole.
- The patient later admitted to persistent shoulder pain he attributed to an injury, which could have been related to diaphragmatic irritation secondary to abscesses.

Conclusion

- Clinicians need to be aware that not all pulmonary infiltrates are viral or bacterial pneumonia.
- Systemic amoebiasis must be included in the differential diagnosis to prevent significant morbidity and possibly mortality.

References

Diagram of Amoeba life cycle courtesy of CDC found on Website below:
<http://www.dpd.cdc.gov/dpdx/HTML/Amebiasis.htm>

- Li, E, Stanley, SL. Amebiasis. Gastroenterol Clin North Am 1996; 25:471.
- Haque, R, Huston, CD, Hughes, M, et al. Amebiasis. N Engl J Med 2003; 348:1565.
- Futcher, T B. I. Am. Med. Ass., 1903, 42, 480. 2
- Ochsner, A, and DeBakey, M E, J. Thoracic Surg, 1936; 5, 285.
- Vyas, P N. Bhargave, N M, et al, Ind. J Surg., 1963, 25, 141.
- Hoffner RJ et al. Common presentations of amoebic liver abscess. Ann Emerg Med. 1999 Sep;34(3):351-5.
- Istre GR et al. An outbreak of amoebiasis spread by colonic irrigation at a chiropractic clinic. N Engl J Med. 1982 Aug 5;307(6):339-42.
- Light, Richard. Pleural effusion. N Engl J Med. 2002 Jun; 346(25):1971-7.
- MKSAP 12. American College of Physicians.
- Rashidul Haque. Amebiasis. N Engl J Med. 2003 Apr;348(16):1565-73.
- Samuel, Stanley. Amebiasis. Lancet. 2003 Mar; 361:1025-34.
- Seeto RK et al. Amoebic liver abscess: epidemiology, clinical features, and outcome. West J Med. 1999 Feb;170(2):104-9.
- UpToDate Online;
 - Intestinal amoebiasis
 - Pulmonary manifestations of amoebiasis
 - Extraintestinal *Entamoeba histolytica* amoebiasis

The views expressed in this article are those of the author(s) and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the United States Government.

Laboratory Data Selected Laboratory Values

	Admission Values	Discharge Values
WBC	6.1 x 1000/UL (19.6) before adm.	7.1 x 1000/UL
H/H	14.6 / 42.9 gm/dl / %	
HIV	Negative	Negative
RPR	Negative	Negative
PT/PTT/INR	14.5 H / 34.0 / 1.14	16.7 H / 33.0 / 1.36

Amoeba Antibody	Strongly Positive 7.3 (0.9 - 1.1)
C. Immittis Antibody	Negative
Blood Cultures x 4	Negative after 5 Incubation Days
Fungal Culture	Negative After 8 Weeks
AFB Culture	No Growth After 8 Weeks
Ova and Parasites	Negative x 2
Viral Culture	Negative after 14 Incubation Days

Pleural fluid analysis via catheter inserted by Interventional Radiology

Gram Stain	Moderate RBC, No WBC, No Organisms
Color	Bloody Red with syrup consistency
Cell Differential	113,000 WBC, 90% PMN, 3% Lymphocytes, 7% Monocytes
Red Blood Cells	360,000
Glucose	6 mg/dl
Total Protein	5.2 mg/dl
LDH	19,989 IU/L
PH	7.62
Cultures	AFB, Bacterial, and Fungal all Negative



Amalgam Safety

LT Mihae Ravey, DC, USNR

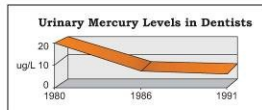
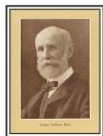
Amalgam

- Alloy of elemental liquid mercury with an alloy powder (silver, tin, copper, zinc, palladium or indium)



History of Amalgam

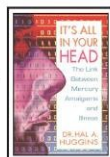
- 600 A.D. Tin-mercury restorations in China
- 1830s Silver-mercury in France
- 1840s Amalgam controversies
- 1895 G.V. Black improved handling & performance
- 1924 Alfred Stock German Chemist mercury poisoned
 - Published papers: dangers of mercury in dentistry
- 1934 German physicians studies on patients
 - Published papers: no health risks from amalgams
- 1970-90s Concern for dentists and patients
 - concern over occupational exposure of mercury vapor shifts to dentists
 - 10% of dental offices had excess levels
 - > threshold limit of 50 ug/m³
 - urinary mercury levels high
 - mild functional effects found
 - ADA institutes mercury hygiene campaign
 - urinary mercury levels lowered 50 %
 - a shift in concerns
 - from occupational risk to dentists to patient risk
 - ability to measure mercury release from amalgam restorations in expired air
 - early tests grossly overestimated



Mandel JADA 1991
Salway J Pub Health Dent 1991

Anti-amalgamist

- Dentists specialize in treating "mercury toxicity" becomes marketing tool
- Hal Huggins dentist from Colorado
 - Publications, videotapes, seminars, website
 - Amalgam can cause emotional problems, neurological disorders, cardiovascular problems, collagen diseases, allergies, digestive problems and immunological disorders
 - Recommends replacing mercury fillings w/ other materials and taking vitamins and other supplements
- 1990 Exposé on Mercury Fillings on 60 Minutes



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Care-EvidenceBase

- Critically evaluating research literature and clinical data
 - lay population and many dentist unfamiliar with
 - peer-reviewed dental literature
 - Information from media and internet
- 1991 Survey by ADA
 - 1000 adults
 - Close to 50% believed health problems associated w/ amalgam



Guyatt JAMA 1993
Boden JADA 2001

Amalgam Advantages

- Inexpensive
- Easy to use
- Durable
- Standard of care >150 years
- Resin-free
 - Less allergic than composite



Amalgamation

- Mercury (Hg) activates reaction
- Powder alloy (silver-copper-tin) mixed with liquid mercury
 - No free mercury remains within several hours
 - Chemically bound; stable



Mercury Monitoring

- Urine
- Blood
- Exhalation
- Hair

Amalgam Restoration

- About 70 million amalgam restorations in U.S./year
- Mercury vapor released
 - Difficult to accurately determine vapor levels
 - Olsson J Dent Res 1992
 - Chewing and brushing
 - Berglund J Dent Res 1990
 - Placement & removal
 - 90% reduction w/ high speed suction
 - Pohl Acta Odontol Scand 1995



- Low levels of mercury over time
 - Depends on number of fillings
 - Studies show: 0.03-0.27 micrograms/day
 - Well below threshold for causing illnesses
 - Pre-clinical effects: 30 micrograms
 - Dangerous: 82 micrograms

Olsson J Dent Res 1995
Manderson Clin Res Oral Biol Med 1997
Benderson J Dent Res 1995

Major Health Organization

- ADA
 - "Dental amalgam is considered a safe, affordable and durable material..."
- U.S. Food and Drug Administration
 - "...no valid scientific evidence has ever shown that amalgams cause harm to patients with dental restorations"
- National Multiple Sclerosis Society
 - "There is no scientific evidence to connect the development of MS or other neurological diseases with dental fillings containing mercury"
- World Health Organization and World Dental Federation
 - "No controlled studies have been published demonstrating systemic adverse health effects from amalgam restorations"
- Alzheimer's Association
 - "According to the best available scientific evidence, there is no relationship between silver dental fillings and Alzheimer's..."

ADA's Dental Mercury Hygiene recommendations

- Education and train all personnel involved in handling of mercury
- Well-ventilated work spaces
- Floor coverings nonabsorbent, seamless, easy to clean
- Pre-capsulated amalgam alloys only
- Use amalgamator w/ cover closed
- Recap single-use capsules, store in closed container & recycle
- Use care, no skin contact
- High-volume evacuation system when removing or finishing



Comparison of alternative materials

	Amalgam	Composite	Glass ionomer
Systemic Toxicity			
Acute	None	None	None
Chronic	Not verified	Not verified	Not verified
Allergic reactions	Rare	Rare, but many components have allergic potential	Extremely rare
Anaphylaxis	None so far	Isolated cases	None so far
Cytotoxicity	Low	Slight to high	Slight to high
Mutagenicity or carcinogenicity	None	Cerata components mutagenic in vitro	Slight mutagenicity
Lichoid reactions	Yes	Yes	None
			WHO 1997

Poster Design Tips

- Bulletize your text (think “Reader’s Digest”)
- If using powerpoint, keep to less than 18 slides (not inclusive of the title slide) (small 32x40 poster)
- If using word, five to seven pages, maybe a bit more. (bullets only) (small 32x40 poster)
- Images should be in jpg format. We prefer 300 dpi at the **final** printing size. If you need scans, we can do that for you.
- Images downloaded from the web will not print well (low resolution) and may cause a copyright violation. Always ask permission from the site prior to using images. (only exception is from federal sites, ie: CDC, Navy, etc.) In these cases (if photos) a credit line to the photographer should be included.

Poster Design Tips

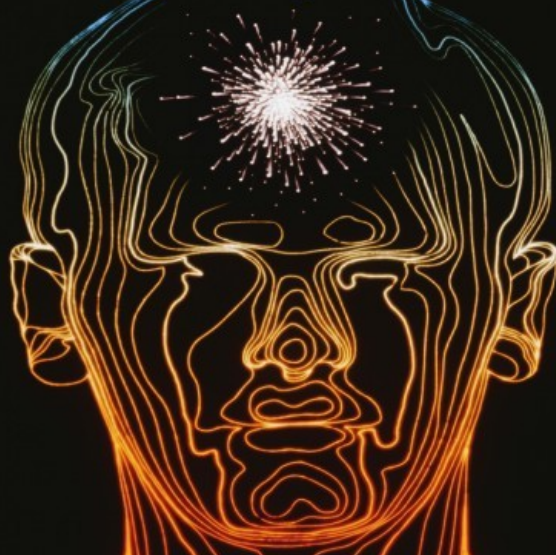
- ✉ Permission should be requested if using Journal/text images as well (more about copyright to follow)
- ▢ Provide the spread sheets for any charts or graphs. We may need to recreate them for you and will therefore need the data points.
- ▢ **Do not** layout poster in publisher. Let us do the design work for you (*truly this is easier for us*)
- ▢ You will be sent a draft of the poster (pdf Acrobat file) via email and will have an opportunity to fine tune or make changes
- ▢ Your poster will not be printed until you give us the approval for print

Marketing poster

- ▣ You have the program/presentation/research project
- ▣ We'll create your advertising

Memory Enhancement Group

For Those Experiencing Memory Difficulties



**4 sessions beginning the first Friday of each month
10:15 to 11:45
No referral required - Call 953-7641 to enroll
Neuropsychology Clinic
Bldg 3, 3rd Deck**

Don't you understand
what I just said?

do parts of your conversation seem missing?

- Do you and your partner have communication difficulties?
- Do you have to deal with someone you feel is "toxic?"
- Beating your head against a brick wall with your children?
- Is talking to your teenager like talking to a Martian?
- Would you like to improve your relationship with your partner, your coworkers, your children, Your chain of command?

Conversation Skills

This group provides an interactive opportunity to learn and practice conversation skills that apply to all relationships. Communication that is clear, respectful and effective can be learned. So if you answered "Yes" to any of the questions above, please join us for Conversation Skills group where we will take a "solution-focused" approach to improving your relationships with others.



Wednesdays
0930-1100
Psychology Department
Building B, 3rd Floor
953-7641

Safety begins with **You!**

SAFETY



Performance Improvement

Reporting to
reduce
medication
errors

Providing safe
environment

Reporting
adverse drug
reactions

Reporting
variance/
sentinel events

Maintaining
competencies
Reducing
restraint use

Set clinical
alarms
Provide clean
environment

National Patient Safety Goals

- Using two patient identifiers
- Performing procedure "time out"
- Not using dangerous abbreviations
- "Read back" verbal orders/critical test
- Careful use of look alike/sound alike drugs
- Standardized drug concentrations
- Reconcile home medications on admit
- Fall injury prevention
- Follow hand washing guidelines



The Great American Smokeout

Take the Challenge
Take the Day off from Smoking

Join US in
going
"Cold Turkey"



Commit to Quit
(even if just for
24 hours)

Join the
Millions
That have
succeeded

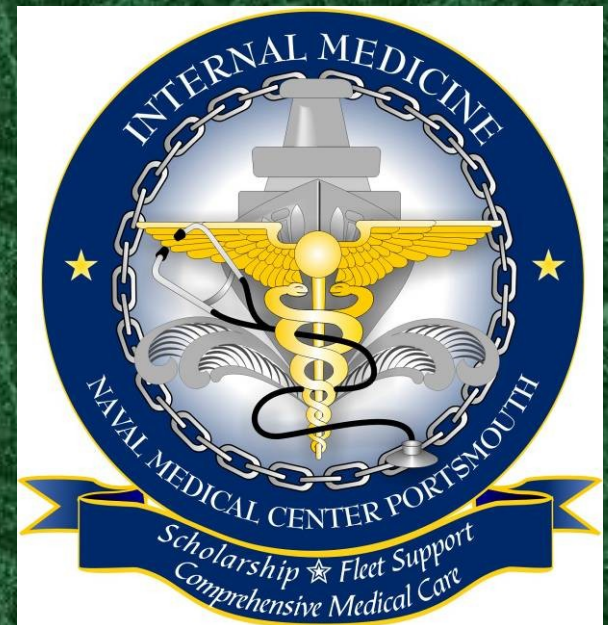
Make this day
the first day of a
Life without
Tobacco

Need
Help/Support?
Call 953-9236





Misc. Design



OTOLARYNGOLOGY- HEAD AND NECK SURGERY



*Naval Medical Center
Portsmouth, Virginia*

Sponsor Information



Naval Medical Center
Portsmouth



Psychiatry

Residency Program



Naval Medical Center, Portsmouth



Pediatric Admission Contact Information

Ward Admissions Page 757-669-2116
Pediatric Critical Care Admissions Call 757-953-3521
Neonatal Intensive Care Transfers Call 757-953-4691
Hematology-Oncology Urgent Consults Page 757-669-2131



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Fax: (757) 953-5298
Email: bbhart@mar.med.navy.mil



General Surgery Clinic

Naval Medical Center Portsmouth
Your Appointment Information

Patient's Name: _____

Doctor: _____

Date / Time: _____

Given by: _____

Temporary Parking Permit

OB - Gyn
Department



Naval Medical Center
Portsmouth

Expires:

Medical Illustration

Turn Around Times

- Vary depending on workload/type of work requested
 - Fall and Spring are extremely busy
 - Feb – April & Sept – Oct Heaviest volume of the year
- Call early to insure project completion by your due date

 Hand renderings require extra time

 Bring examples – your rough drawing etc.

 Posters 2-3 weeks (except in Spring and Fall)

Sizing Limits

🐉 Posters

- 42 x ????? Up to 100 ft
- *(of course I don't expect to print one that long)*

▢ Standards?

- For Research – 42x72 roll up, 32x40 trifold
- For Marketing – 24x36, 18x24, 36x48

▢ Lamination – Yes

- Up to 24" hot roll, double sided
- 40" laminator, vinyl laminate, single sided

Printing

- Short run Color (No copying)
 - 1000 copies or less – duplexed
 - 8.5x11, 8.5x14, to 11x17
 - Posters (marketing 18x24) runs of less than 50 preferred
 - Smaller sized marketing posters – runs of 250 or less

The Infamous “Flamingo Award”



- ❑ Given for any large Symposium (20 posters or more)
 - Ex: Int Med ACP, NMCP research competition
- ❑ To the very **last** person to submit their information (usually **way** after the deadline)
- ❑ Lovely hand made trophy and tiny flamingos hidden in your poster

Cost?? Who Pays

☐ Research related

- Covered via Visual Info OPTar
 - GME / Research is “Job One”

🐞 Marketing/Educational

- OPTar transfer will be requested if total cost of materials needed will exceed \$200.00

Medical Illustration Office



Remember

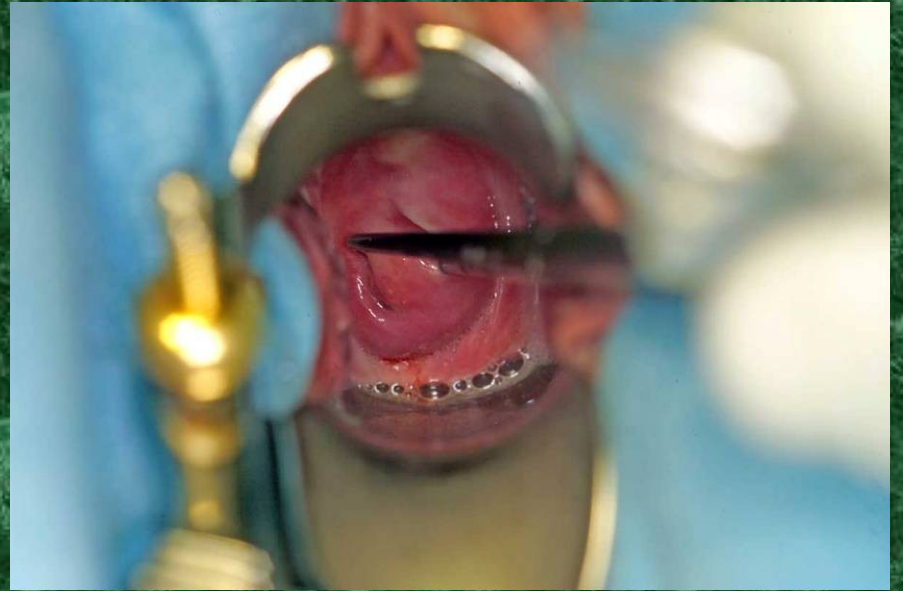
- Two "Man" Crew
- Spring and Fall – very very busy
 - 87 research comp posters this year
- We'll help in anyway We can. Just ask
- Questions?

What can they do for you - MedPhoto

- ☞ Patient Photography (pre, intra, post op, clinical)
- ☐ Specimen/Autopsy
- ☐ Medical-Legal
- ☐ Copy / Scanning / Digitizing Images
- ☐ Portrait (formal, informal, passport)
- ☐ Public Affairs
 - “Grip and Grins”
- ☐ Large Format Prints / Framing









A Few Words about Copyright

□ Governing Instructions

- SECNAVINST 5870.5
- OPNAVINST 3104.2
- NAVMEDCENPTSVAINST 5290.2
- Medical Photography Policy and Procedure Manual

Guidelines

- ❧ All images, photographed, rendered, or drawn, by hospital personnel, for the purposes of patient care, and during duty hours, belong to the Naval Medical Center.
- ❧ Photographs can be released to patient under privacy act.
- ❧ Physician or provider can maintain images for the purposes of patient care.

Guidelines (cont)

- ❑ Physicians must surrender all images upon their transfer, or end of service.
- ❑ Ensure patient has a copy of all images prior to their transfer, or end of service.
- ❑ Medical personnel are NOT allowed to keep images upon transfer or end of service regardless of who took the photographs.
- ❑ Consent from the patient must be obtained using the NMCP photographic request form prior to taking images, and filed in medical record.

Guidelines (cont)

- ❑ A properly documented consent, allows images to be used for lecture, training, or publication, without legal ramifications or violating HIPPA.
- ❑ Form is included in NAVMEDCENPTSVAINST 3104.2
- ❑ For privacy reasons, photographs kept in patient records is at physician discretion. (Breast, Abdomen, Etc)
- ❑ Allowed to utilize images for boards, credentials, and other official purposes.

Proper Credit Requirement

- ▣ All images destined for publication must be credited as follows
 - U.S.Navy Photo: by HM1 Joe Sailor

Guidelines (cont)

- ▣ Physicians requesting a copy of patient photographs upon transfer must contact the NMCP legal department.

“Can you scan this for me?”

“Can we use this image I downloaded from the web?”

🐞 Maybe..... but probably not

- ❑ Must have written permission to use
 - **NEVER** use Frank Netter, MD, Far Side or **any other** cartoons
- ❑ Just because it's on the web does not mean it is public domain
 - Check with the webmaster for the site for permission or usage criteria
 - Web images are usually very poor quality

The End

Questions?
Comments?